

CLAIM AMENDMENTS

1-28. Cancel

29. (New) An incandescent lamp comprising:
a light transmissive bulb having a wall defining an enclosed volume sealed in a vacuum-tight manner;
a luminous body positioned in the enclosed volume; the luminous body including a metal carbide having a melting point greater than the melting point of tungsten, the least distance between the luminous body and the wall being less than 18 mm;
electrical leads sealed through the wall and electrically coupled to the luminous body;
a filling enclosed in the enclosed volume including:
an inert fill gas; and
one or more additives composed of carbon, hydrogen and halogens, so that the total content in the gas phase, based on a cold filling pressure of 1 bar, in mol percent is:
carbon 0.1% - 5.0%,
hydrogen 0.2% - 20.0%,
halogen, not including fluorine 0.05% - 0.5%;
and no nitrogen;
whereby a first cycle process is supported attributed to the carbon, and a second cycle process is supported which is attributed to the metal and halogen.
30. (New) The incandescent lamp in claim 29, wherein the luminous body consists of one or more metal carbides or an alloy of metal carbides.
32. (New) The incandescent lamp in claim 29, wherein the luminous body comprises a core of a first material and a coating of a second material being a metal carbide formed on the surface of the core.
33. (New) The incandescent lamp in claim 32, wherein the core comprises one or more carbon fibers.
34. (New) The incandescent lamp in claim 29, wherein the fill includes a hydrocarbon including at least one of CH₄, C₂H₆, C₂H₄, and C₂H₂.

35. (New) The incandescent lamp in claim 29, wherein the fill includes a halogenated hydrocarbon including at least one of CH_2Cl_2 , CHCl_3 , CH_3Cl , CH_3I , $\text{C}_2\text{H}_5\text{I}$, CH_3I , $\text{C}_2\text{H}_5\text{I}$, CH_2Br_2 , CHBr_3 , and CH_3Br .
36. (New) The incandescent lamp in claim 29, wherein the total quantity of halogen introduced into the lamp is less than that of the hydrogen.
37. (New) The incandescent lamp in claim 29, wherein the halogen is iodine and in mol percent, $(\text{iodine})/2 < \text{hydrogen} < 2*(\text{iodine})$.
38. (New) The incandescent lamp in claim 29, wherein the fill further includes in the gas phase from 0.3 mol percent to 3.0 mol percent of a compound carbon and sulfur.
39. (New) The incandescent lamp in claim 29, wherein the fill includes:
carbon 0.25% - 5.0%,
sulfur 0.05% - 5.0%, and
hydrogen 0.5% - 40.0%.
40. (New) The incandescent lamp in claim 39, wherein the sulfur and carbon molar concentration relation is such that in mol percent:
 $(\text{sulfur}) < \text{carbon}$ and $\text{carbon} < 10*(\text{sulfur})$.
41. (New) The incandescent lamp in claim 40, wherein the hydrogen, sulfur and carbon molar concentration relations are further such that in mol percent:
 $4*(\text{carbon}) + 2*(\text{sulfur}) < (\text{hydrogen}) < 8*(4*(\text{carbon}) + 2*(\text{sulfur}))$.
42. (New) The incandescent lamp in claim 41, wherein the fill includes iodine having a molar concentration that is between 0.1% and 15.0% and is less than the molar concentration of the hydrogen.
43. (New) An incandescent lamp comprising:
a light transmissive bulb having a wall defining an enclosed volume sealed in a vacuum-tight manner;

a luminous body positioned in the enclosed volume; the luminous body including a metal carbide having a melting point greater than the melting point of tungsten, the least between the luminous body and the wall being less than 18 mm;
electrical leads sealed through the wall and electrically coupled to the luminous body;

a filling enclosed in the enclosed volume including:

an inert fill gas; and further one or more additives composed of carbon, hydrogen and halogens, so that the total content in the gas phase, based on a cold filling pressure of 1 bar, in mol percent is:

carbon 0.25% - 5.0%,

sulfur 0.05% - 5.0%,

hydrogen 0.5% - 40.0%,

halogen, not including fluorine of 0.02% - 0.5% or iodine of 0.02% - 40.0%,

and no nitrogen;

whereby a first cycle process is supported attributed to the carbon, and a second cycle process is supported which is attributed to the metal and halogen.

44. (New) The incandescent lamp in claim 43, wherein the fill, in the gas phase, based on a cold filling pressure of 1 bar, is in mol percent:

carbon 0.1% - 5.0%,

sulfur 0.02% - 5.0%, and

chlorine 0.42% - 30.0%.

45. The incandescent lamp in claim 29, wherein the halogen is bromine.

46. The incandescent lamp in claim 29, wherein the halogen is chlorine.

47. The incandescent lamp in claim 29, wherein the halogen is iodine.

CLAIM STATUS:

Claims 1-28: (Cancel)

Claim 29-47: (New)